OIPE MAR 26 2007 PATENT & TRADEMARK OFFICE

AMENDMENTS TO THE SUBSTITUTE SPECIFICATION

Please replace the paragraph at page 5, line 17, with the following rewritten paragraph:

Fig. 11A is a diagram, showing ~~flow matching~~mapping and a cooking flow to be created. Fig. 11B is a diagram, showing ~~flow matching~~mapping and cooking flows which are stored in advance in the cooking-flow database.

Please replace the paragraph at page 14, line 3, with the following rewritten paragraph:

The recognition processing section 110 executes a processing such as ~~flow matching~~mapping, based on observation data which is outputted from the sensing section 200. Thereby, it estimates a cooking recipe for a dish which is now prepared by a person. In addition, it recognizes an ingredient which is now cooked by the person and its cooking operation. Herein, ~~flow matching~~mapping is well known, and its details are disclosed in Publicly-known Document 1 (The Tree-to-Tree Correction Problem (KUO-CHUNG TAI): Journal of the Association for Computing Machinery, Vol 26. No 3, July 1979. pp 422-433).

Please replace the paragraph at page 21, line 2, with the following rewritten paragraph:

In a step S15, the recognition processing section 110 executes ~~flow matching~~mapping between the cooking flow which have been created at the step S13 and each cooking flow which is stored in the cooking-flow database 108. Thus, it calculates a relevance factor that indicates which of the cooking flows stored in the cooking-flow database 108 is closest to a dish which is now prepared by a person. Herein, calculating a relevance factor by ~~flow matching~~mapping is disclosed in Publicly-known Document 1 described above.

Please replace the paragraph at page 21, line 11, with the following rewritten paragraph:

Fig. 11A is a diagram, showing ~~flow-matching~~mapping and a cooking flow to be created. Fig. 11B is a diagram, showing ~~flow-matching~~mapping and cooking flows which are stored in advance in the cooking-flow database 108. In the example of Fig. 11B, a cooking flow F1 of braised beef and potatoes, a cooking flow F2 of curry, a cooking flow F3 of stir-fried vegetables and a cooking flow F4 of an omelet are stored beforehand in the cooking-flow database 108.

Please replace the paragraph at page 21, line 26, with the following rewritten paragraph:

Then, the recognition processing section 110 calculates a relevance factor of the cooking flow shown in Fig. 11A to each of the cooking flows F1 to F4 of braised beef and potatoes to an omelet shown in Fig. 11B. In the example of Fig. 11B, the relevance factors to the cooking flows F1 to F4 for braised beef and potatoes, curry, stir-fried vegetables and an omelet are calculated as 0.8, 0.7, 0.4 and 0.2, respectively. Then, the recognition processing section 110 deletes the cooking flows F3 and F4 of stir-fried vegetables and an omelet whose relevance factors are below a predetermined value (e.g., 0.5), from the subject of matching in the next ~~flow-matching~~mapping. In other words, in the following ~~flow-matching~~mapping, no relevance factor is calculated to the cooking flows F3 and F4 of stir-fried vegetables and an omelet. This helps speed up a flow-matching processing.

Please replace the paragraph at page 39, line 15, with the following rewritten paragraph:

As described so far, in this ingredient cooking-operation recognition system, a template certainty factor is stored in the feature-quantity template T4 itself. Hence, a definition can be given of how reliable an ingredient or a cooking operation which is acknowledged in each moment by a camera is. Besides, a primary certainty factor passes through the step of ~~flow-matching~~mapping, and thereby, it becomes more certain

gradually to turn into a final certainty factor. Consequently, a recognition result which is more reliable can be secured.

Please replace the paragraph at page 44, line 23, with the following rewritten paragraph:

(2) Furthermore, in the above described configuration, it is preferable that the ingredient cooking-operation recognition system further include: a cooking-flow database which stores cooking flows which are created in advance for various dishes; and a relevance-factor calculating means for, using ~~flow-matching~~mapping, calculating a relevance factor that indicates which of the cooking flows that are stored in the cooking-flow database is closest to the cooking flow which is created by the cooking-flow creating means, the cooking-operation recognizing means recognizing an ingredient and a cooking operation, based on the relevance factor which is calculated by the relevance-factor calculating means and the primary certainty factor.